

CYATHOCRINITES MILLER, 1821 (CRINOIDEA): PROPOSED  
DESIGNATION OF A TYPE-SPECIES UNDER THE PLENARY  
POWERS. Z.N.(S.) 1795

By N. Gary Lane (*Dept. of Geology, Univ. Calif. at Los Angeles, Los Angeles, Calif., 90024, U.S.A.*)

In order to promote stability of nomenclature this communication requests the International Commission on Zoological Nomenclature to make use of its plenary powers to annul the type-species designation for *Cyathocrinites* Miller, 1821, by Ferdinand Roemer (1851, *Verh. d. naturhist. ver. d. pruess. Rheinl.*, Jahrg. 8), and to validate the next subsequent designation by Charles Wachsmuth and Frank Springer (1880, *Rev. Palaeocr.*: 1), which accords with all later usage of this genus-group name.

*Cyathocrinites* was proposed by J. S. Miller (1821, *Nat. Hist. Crin.*) without designation of a type-species. Four nominal species were included in the genus by Miller: *Cyathocrinites planus* Miller, *C. quinquangularis* Miller, *C. tuberculatus* Miller, and *C. rugosus* Miller. Austin and Austin (1843, *Ann. Mag. Nat. Hist.* 11) made *Cyathocrinites rugosus* Miller the type-species, by monotypy, of their *Crotalocrinites* Austin and Austin, and *C. quinquangularis* has been universally regarded as a species of *Poteriocrinites*.

Although the genus-group name *Cyathocrinites* (= *Cyathocrinus* Agassiz, 1834) was used several times prior to Roemer's article in 1851, he was the first to make a firm designation of the type-species (*op. cit.*, p. 365): "... indem man den *Cyathocrinus tuberculatus* als Typus derselben betrachet . . .," which I translate as "since one can consider *Cyathocrinus tuberculatus* as type," and judge to be an unqualified, unambiguous designation of the type-species. Prior to Roemer's designation, *C. tuberculatus* had been included in the genus *Isocrinus* Phillips, 1841 (not von Meyer, 1837) by Phillips, which he later called *Taxocrinus* Phillips, 1843 (*in* Morris, *Cat. Brit. Foss.*). In neither instance did Phillips designate a type-species for his genus-group name. Consequently Roemer rightly considered *Cyathocrinites* a senior subjective synonym of *Isocrinus* Phillips and *Taxocrinus* Phillips, as well as *Cladocrinites* Austin and Austin, 1843, and so stated (*op. cit.*, p. 365): "Genus *Cyathocrinus*. Synon. *Isocrinus et Taxocrinus* Phillips. *Cladocrinites* Austin." Springer (1902, *Am. Geol.*: 94) ignored Roemer's type designation, although he was aware of it (Springer, 1920, *Crin. Flexibilia*: 210), and made *Cyathocrinites tuberculatus* Miller, 1821, the type-species of a monotypic genus of flexible crinoid, *Temnoocrinus* Springer, 1902.

Wachsmuth and Springer (*op. cit.*, p. 79) said that *Cyathocrinites planus* Miller "ought to be the type of the genus," and (p. 81) "this has induced us to consider the Ashmolean specimen [one of Miller's original specimens] alone to be *Cyathocrinus planus* and the type of the genus." *Cyathocrinites planus* is an inadunate crinoid and all subsequent workers have considered *C. planus* to be the type of *Cyathocrinites* (Bassler, 1938, *Foss. Catalogus*, 83: 79). Using the concept that *Cyathocrinites* refers to an inadunate crinoid, *Cyathocrinites*

has been made the type-genus of the family CYATHOCRINIDAE and the suborder Cyathocrinina, one of the major subdivisions of inadunate crinoids.

If Roemer's type designation is not annulled then *Cyathocrinites* must stand for a monotypic flexible crinoid (order Flexibilia), and cannot be used for the fossils with which the name has been associated for so many years. In this event, the next available genus-group name for fossils now called *Cyathocrinites* is *Atocrinus* M'Coy, 1844, which has been regarded as a junior synonym since 1860. Although *Saccosomopsis* Meek and Worthen, 1870, has been considered a junior synonym of *Cyathocrinites*, this writer has information as yet unpublished, that this name is referable to a distinct genus-group. Consequently, *Atocrinus* would have to be resurrected for *Cyathocrinites* and the 93 nominal species currently included.

Consequently, I request the International Commission to:

- (1) make use of its plenary powers to set aside all designations of type-species for *Cyathocrinites* Miller, 1821, made prior to the Ruling now requested and, having done so, to designate *Cyathocrinites planus* Miller, 1821, to be the type-species of that genus;
- (2) to place the following generic names on the Official List of Generic Names in Zoology:
  - (a) *Cyathocrinites* Miller, 1821 (gender : masculine), type-species, by designation under the plenary powers in (1) above, *Cyathocrinites planus* Miller, 1821;
  - (b) *Tennocrinus* Springer, 1902 (gender : masculine), type-species, by original designation, *Cyathocrinites tuberculatus* Miller, 1821;
- (3) to place the following specific names on the Official List of Specific Names in Zoology:
  - (a) *planus* Miller, 1821, as published in the binomen *Cyathocrinites planus* (type-species of *Cyathocrinites* Miller, 1821);
  - (b) *tuberculatus* Miller, 1821, as published in the binomen *Cyathocrinites tuberculatus* (type-species of *Tennocrinus* Springer, 1902).